

U.S. Rural Electrification Administration, Technical Standards Division
FARM FEED MIXERS
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The size and type of feed mixer depends upon the requirements of the farmer. On the dairy farm approximately one pound of grain mixture is fed for each three or four pounds of milk produced. A herd of 10-5000 pound cows would require approximately 7 tons of feed annually. On the poultry farm approximately 80 pounds of feed is fed per hen per year. For a flock of 100 birds, approximately 8000 pounds of feed are required annually.

On this basis a one-fourth to one-half ton capacity feed mixer will generally be adequate for maximum requirements of ordinary farm use. Electric motors of 3/4 h.p. and over are large enough to drive mixers of these capacities.

Most feed mixers can be divided into two general classes, the horizontal "tumbler barrel" type and the agitator type in which mixing is accomplished by a rotating spiral or screw within the mixing chamber. Most commercial models are of the second type with either a vertical or horizontal mixing chamber. The "tumbling barrel" mixer depends upon the rotation of the mixing chamber itself. Several homemade designs of this type are available.

For most economical use of floor space the vertical agitator mixer is to be recommended. This mixer can be divided into two general classes depending on whether it has a feed charging hopper that is usually elevated from 24 to 30 inches, or a hopper that is at floor level. The vertical mixer with the charging hopper above the floor is easier to install but requires extra handling of the feed. A charging pit is required with the floor level type and would therefore entail additional expense for installation. This pit must be large enough not only for the hopper assembly but also to allow access to the lower bearing and room for cleaning out the bottom of the conveyor tube.

Additional head room should be allowed to remove the upper bearing and for the pulley and motor assembly. In all cases it is important that a solid foundation is provided to sustain the weight of the mixer and ingredients plus any vibration that might be encountered.

Thorough mixing of dry feed is accomplished in from 2 to 12 minutes depending upon the size of the batch and feed mixture desired. An average figure for all mixers is approximately 2/3 kwh/T.

A selected list of farm feed mixers which have capacities up to 1/2 ton are listed on separate pages.

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DATA ON FARM FEED MIXERS

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Company	Model	Batch	Capacity per H.P.	Motor Size	Height Above Floor	Depth Below Floor	Space	Charging Hopper	Diam. of Mixing Hopper	Price* (1947)	Remarks
Barker Poultry Equipment Co. Ottumwa, Iowa	A 1	1/4 T.	3/4	7'-8"				22"	44"		V belt drive
	D 1	1/2 T.	2	8'-0"				30"	52"		" " "
	D 2	1/2 T.	2	8'-0"	24"			floor	52"		" " "
								level			
Brower Mfg. Co. Quincy, Ill.		700 lb.	1 or 2	7'-11- 3/8"			triangular	above floor	39 1/2"	\$149.50	V or flat belt drive 1 h.p. 1,110-120 V a.c. motor, \$62.00
The Duplex Mfg. Co., Springfield, Ohio	1	1/2 T.	3	8'- 10"	23"	38" x 38"		floor level	45"	\$420.50	V or flat belt drive
Ralph W. Fry N. Delaware Drive, Easton, Pa.	2	100 lb.		2'- 11"		26 1/2" x 27"			19" x 25" x 12" deep	\$218.40	Horizontal type.
	4	500 lb.		3'-9"		46" x 51"			39" x 52" x 28 1/2" deep	\$578.50	" " "

* All prices f.o.b. factory less motor unless otherwise designated

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Company	: Model :	Capacity per Batch	: Motor Size : H.P.	: Height Above Floor :	: Depth Below Floor :	: Floor Space :	: Charging Hopper :	Diam. of Mixing Hopper	: Price* : (1947)	Remarks
S. Howes Co., Inc. Silver Creek, N. Y.	: 507 :	700 lbs.	3	9'-6"	42"	9'-2"x: : 7'-11":	:	32" diam. : x 7'-0" long	\$679.80	Horizontal; for light materials.
Papac Machine Co., Shortsville, N. Y.	:	1/2 T.	2	7'-7 $\frac{1}{2}$ "	:	46 $\frac{1}{2}$ " x: : 46 $\frac{1}{2}$ " :	above floor	:	\$250.00	Square mixing chamber. Flat belt drive
Scott del, Inc. Swanton, Ohio	:	25 bu.	1 $\frac{1}{2}$	8'-2"	:	32" x : 27" above: : 32" : floor	:	41"	\$231.25	Price with Motor.
	:	25 bu.	2	8'-2"	20"	36" x : floor : 36" : level	:	41"	\$320.00	" "
Sidney Grain Machinery Co. Sidney, Ohio	Kwik- Mix	20 bu.	2	7'-8"	20"	30" x : floor : 30" : level	:	36"	:	V belt drive.